

TCL

WALL MOUNTED SPLIT-TYPE AIR CONDITIONERS

SERVICE MANUAL

No.TE080528

Models

KFTHP-12

KFTHP-18

KFTHP-24



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IMPORTANT NOTICE

This service manual is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. It is to be installed and service by a licensed HVAC technician. Any attempt to repair the appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

The information, specifications and parameter are subject to change due to technical modification or improvement without any prior notice. The accurate specifications are presented on the nameplate label.

How to order spare parts

To have your order filled promptly and correctly, please furnish the following information:

1. Model No. with Indoor or Outdoor
2. No. in the Explosion View
3. Part Name
4. The quantity you ordered

Technical Specifications

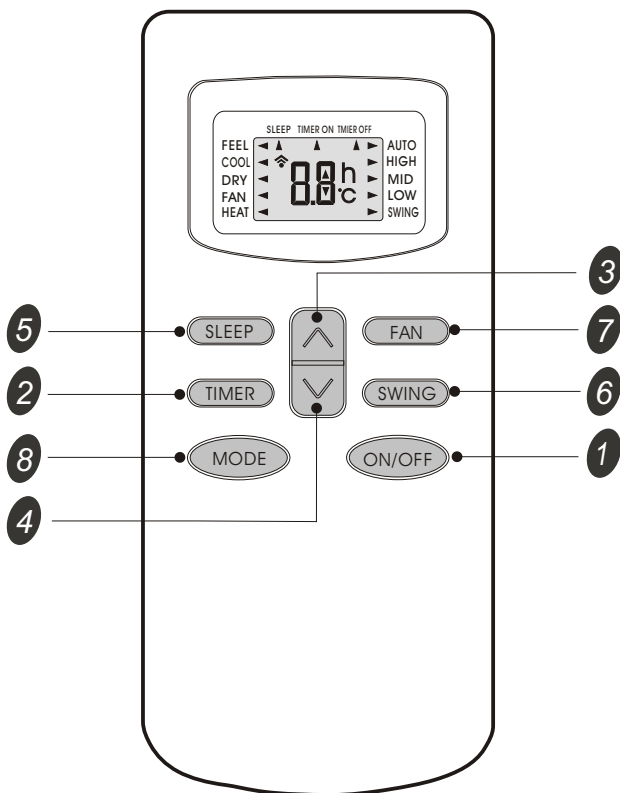
Model No.			KFTHP-12	KFTHP-18	KFTHP-24	
Type			Heating pump	Heating pump	Heating pump	
Control type			Remote	Remote	Remote	
Rated cooling capacity		Btu/h	12500	18000	24000	
Rated heating capacity		Btu /h	12000	17300	23500	
SEER		Btu/W.h	13.1	13.3	13.0	
HSPF		Btu/W.h	8.8	8.1	8.5	
Moisture removal		Liters/h	1.2	1.5	2.0	
Indoor noise level at cooling	High	dB(A)	42	56	57	
	Med.	dB(A)	40	54	55	
	Low	dB(A)	38	50	52	
Outdoor sound power level		dB(A)	52	54	59	
Electrical Data						
Power supply			60Hz/1P			
Voltage range		V	208-230V	208-230V	208-230V	
Rated current	Cooling	A	4.6	6.7	9.7	
	Heating	A	4.6	6.4	9.7	
Rated input	Cooling	W	1000	1550	2050	
	Heating	W	1000	1500	2050	
Refrigerating System						
Refrigerant/Charge		Gram	R410A	R410A	R410A	
Compressor	Type		Rotary	Rotary	Rotary	
	Model		-----	-----	-----	
	LRA	A	-----	-----	-----	
	MFG		-----	-----	-----	
Expansion device			Capillary tube			
Defrosting system			Microcomputer controlled reverse system			
Fan System						
Indoor air circulation/Hi		m ³ /h	700/730	950/1000	1400/1450	
Indoor fan type			Cross flow	Cross flow	Cross flow	
Motor rotating speed H/M/L	Cooling	rpm	1330/1150/950	1550/1230/1110	1550/1230/1110	
	Heating	rpm	1330/1150/950	1550/1230/1110	1550/1230/1110	
	Dry	rpm	1080	1100	1100	
	Sleep	rpm	1080	1100	1100	
Indoor fan motor output		W	20	60	54	
Outdoor air circulation		m ³ /h	---	---	---	
Outdoor fan type			Propeller fan	Propeller fan	Propeller fan	
Outdoor fan speed		rpm	860	750	860	
Outdoor fan motor output		W	31	76	150	
Connections						
Refrigerant coupling			Flare type			
Connecting pipe	Gas	Inches	3/8" (9.52)	1/2" (12.7)	5/8" (15.88)	
	Liquid	Inches	1/4" (6.35)	1/4" (6.35)	3/8" (9.52)	
Connecting wiring		Size × Core number	3×1.5; 2×0.75	3×1.5; 2×0.75 2×0.2(2×0.33)	3×2.5	
Drainage pipe			O.D 16mm			
Others						
Suitable area		m ²	15~23	20~35	30~50	
Net dimensions (W x H x D)	Indoor	mm	898×280×202	1033×313×202	1250×325×245	
	Outdoor	mm	760×552×256	902×660×307	900×800×360	
Net weight	Indoor	kg	11	14	22	
	Outdoor	kg	34	47	59	
Packing dimensions (W x H x D)	Indoor	mm	995×365×298	1103×395×292	1317×422×338	
	Outdoor	mm	863×605×376	1027×705×433	1031×925×447	
Gross weight	Indoor	kg	14	17	26	
	Outdoor	kg	37	54	65	
Loading Capacity		40'/40'HC	-----	-----	-----	

Operation Details

Remote controller

Remote controller

The remote controller transmits signals to the system.



- 1 ON/OFF button**
Used to start and stop operation when pressed.
- 2 TIMER button**
Used to select TIMER operation.
- 3 UP button (TOO COOL button)**
Used to increase the set room temperature and time.
- 4 DOWN button (TOO WARM button)**
Used to decrease the set room temperature and time.
- 5 SLEEP button**
Used to set or cancel sleep mode operation.
- 6 VANE control button**
Used to adjust airflow direction.
- 7 FAN SPEED control button**
Used to select the indoor fan motor speed: Auto, High, Mid and Low.
- 8 MODE button**
Used to select the type of operation mode: Feel, Cooling, Dry, Fan and Heating(Only for Heat Pump).

Note: Each mode and relevant function will be further specified in following pages.

Remote Control

The remote controller is not preset as Cooling Only Air Conditioner or Heat Pump by manufacturer. Each time after the remote controller replace batteries or is energized, the arrowhead will flash on the front of “Heat” or “Cool” on LCD of the remote controller. User can preset the remote controller type depending on the air conditioner type you have purchased as follows:
 Press any button when the arrowhead flashes on the front of “Cool” , Cooling Only is set.
 Press any button when the arrowhead flashes on the front of “ Heat” , Heat Pump is set.
 If you don’ t press any button within 10 seconds, the remote controller is preset as Heat Pump automatically.

Note :

If the air conditioner you purchased is a Cooling Only one, but you preset the remote controller as Heat Pump, it doesn’ t matter. But if the air conditioner you purchased is a Heat Pump one, and you preset the remote controller as Cooling Only, then you CAN NOT preset the Heating operation with the remote controller.

REMOTE CONTROLLER

The four types of remote controller is as follow:



GYKQ-05



GYKQ-10e (optional)



GYKQ-11e (optional)



GYKQ-12e (optional)

Note: The function of remote controller above is the same.

Electronic Controller

1. Safety Control

(1) Time Delay Safety Control

- 3 minutes delay for compressor---The compressor is ceased for 3minutes to balance the pressure in the refrigeration cycle in order to protect the compressor.
- 2 minutes delay for 4-way valve---The 4-way valve is ceased for 2 minutes to prevent the refrigerant-gas abnormal noise when the HEATING operation is OFF or switch to the other operation mode.

(2) Indoor Pipe Temperature Sensor Frost Prevention Control

When the indoor pipe temperature sensor reads 32°F or below for 5 minutes, the indoor pipe temperature sensor frost prevention control starts. The compressor and outdoor fan stop and indoor fan operates at high speed for 3 minutes. After that, if the indoor pipe temperature sensor reads less than 41°F this control prolonged until the indoor pipe temperature sensor reads 41°F or more.

(3) High Temperature Protection Control

During HEATING operation, the outdoor fan motor and compressor are controlled by the indoor pipe temperature to prevent the high temperature of compressor.

Outdoor fan OFF: when the indoor pipe temperature is $\geq 122^{\circ}\text{F}$

Outdoor fan ON: when the indoor pipe temperature is $\leq 118.4^{\circ}\text{F}$

Compressor OFF: when the indoor pipe temperature is $\geq 143.6^{\circ}\text{F}$

Compressor ON: when the indoor pipe temperature is $\leq 118.4^{\circ}\text{F}$

2. "I Feel" Mode Operation

- (1) When the "I Feel" mode is selected, the operation mode and initial set temperature are determined by the initial room temperature at start-up of the operation except to turn off the air conditioner and operates it again.
- (2) If the mode is change to "I Feel" mode from other mode, the "I Feel" mode doesn't operate until compressor stop for more than 3 minutes.

Mode	Initial room temperature	Initial set temperature
COOLING	78.8°F or more	75.2°F
DRY	68°F to 77°F	64.4°F
HEATING for Heat Pump Type FAN for Cooling Only Type	Less than 68°F	73.4°F

- In the "I Feel" mode , when the controller receives the up or down single of temperature, the set temperature can adjust by 33.8°F upper or lower. The biggest you can adjust by 35.6°F upper or lower.

3. "COOLING" Mode Operation

- (1) When the COOLING mode is selected without setting temperature, the system will set the set temperature at 78.8°F automatically with the AUTO FAN speed.
- (2) When selecting the COOLING mode operation, the system will operate according to the setting by the remote controller and the operation is as following:

Room Temp.					
Set TEMP. +1.8°F					
Set TEMP. -1.8°F					
Time	More than 2 min	More than 2 min	More than 2 min	More than 2 min	More than 2 min
Indoor Fan	Set Speed	Set Speed	Set Speed	Set Speed	Set Speed
Compressor	ON	OFF	ON	OFF	ON
Outdoor Fan	ON	OFF	ON	OFF	ON

4. “DRY” Mode Operation

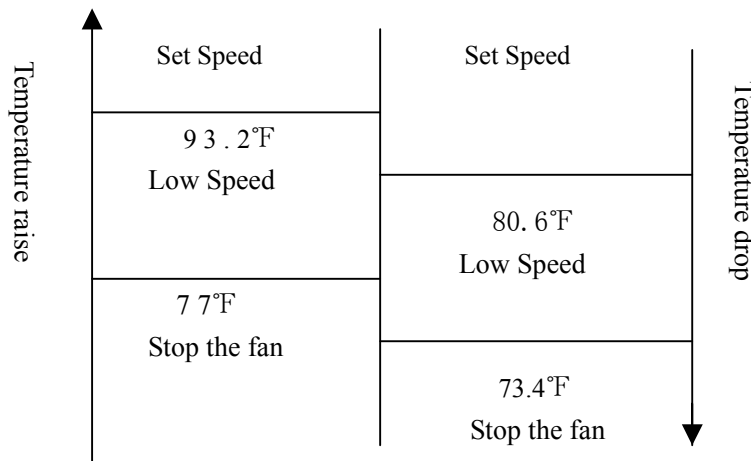
- (1) The system for DRY operation used the same refrigerant circle as the cooling circle.
- (2) When the system operates in DRY mode ,at first it operates in cooling mode at 60. 8°F or 64. 4°F for 3 minutes. And then, the system operates in cooling mode with low speed that regards the temperature of the room temperature sensor reads decrease 35.6°F as the set temperature. During the course of this, the fan speed set operation is failing but the vane motor can be controlled.

5. “HEATING” Mode Operation (Only available for Heat Pump)

- (1) When the HEATING mode is selected without setting temperature, the system will set the temperature at 73. 4°F automatically with the AUTO FAN speed.
- (2) When selecting the HEATING mode operation, the system will operate according to the setting by the remote controller and the operation is as following:

Set Temp. +1.8°F					
Set Temp. -1.8°F					
Room Temp.					
Time	More than 2 min	More than 2 min	More than 2 min	More than 2 min	More than 2 min
Compressor	ON	OFF	ON	OFF	ON
Outdoor fan	ON	OFF	ON	OFF	ON

- (3) In HEATING mode, the indoor fan motor speed is controlled by Cold Air Prevention Control.
- (4) Cold Air Prevention Control
 - The function is intend to prevent cold air from being discharged when the heating operation starts or when defrosting.
 - The indoor fan speed will be controlled as following.
 - The vane angle is at the angle C(100°).



- During the heating operation, if the compressor stops that it will adjust the indoor fan speed, after 30 seconds to stop the fan.

(5) Defrost

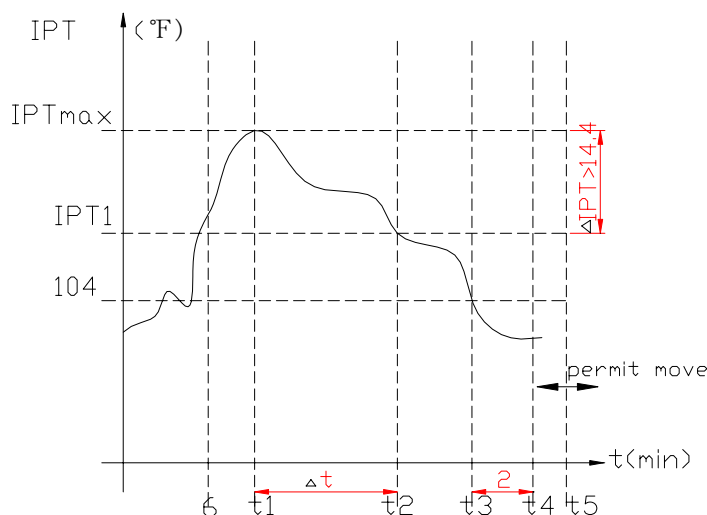
Defrosting of the outdoor heat exchange is controlled by the microprocessor with detection by the indoor pipe temperature sensor.

Defrost control type is according to the JC on the PCB whether is connected.

- **When the JC is connect on the PCB**

When one of the conditions of A, Band C is satisfy, the defrosting operation stars.

- A. IPT--- indoor pipe temperature



In the condition A, it must satisfy the conditions a), b) and c) then into defrosting operation.

- $IPT1$ satisfy $IPT1 = IPT_{MAX} - \Delta IPT$ ($14.4^{\circ}F$)
- $t5 \geq 50$ minutes (the compressor cumulative operation time ≥ 50 minutes, $t5$ is permitted move and lower than $t1$ too).
- $IPT < 104^{\circ}F$, and keep 2 minutes.

According to the condition A enter the defrosting operation, the first defrosting operation time is 8 minutes; After defrosting operation one cycle, and then judge and regulate the defrosting operation time.

B. After the compressor cumulative operation time exceeds 120 minutes and the temperature of the IPT is less than $95^{\circ}F$ for 2 minutes. When the defrosting operation time on this condition exceeds 8 minutes, it will terminate.

C. After the compressor operates continuously for 20 minutes and the IPT is less than $73.4^{\circ}F$ or from the last time of defrosting operation is 50 minutes or more interval. When the defrosting operation time on this condition exceeds 10 minutes, it will terminate.

- **When the JC isn't connected on the PCB**

When the conditions of a) or b) is satisfy, the defrosting operation starts.

- Under the heating operation, the compressor cumulative operation time exceeds 50 minutes and the temperature of the outdoor pipe temperature sensor reads lower than $-14.4^{\circ}F$
- Under the heating operation, the compressor cumulative operation time exceeds 50 minutes, if the indoor pipe temperature sensor reads lower than $104^{\circ}F$ continuously for 2 minutes.

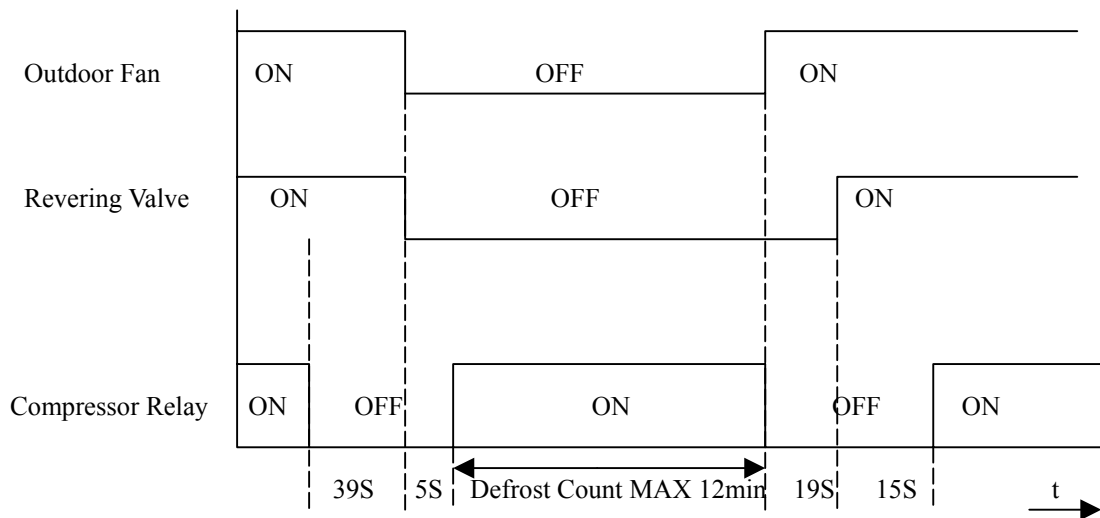
Note: If haven't the outdoor pipe temperature sensor that uses the condition b) to defrost, against use the condition a).

- **Defrost terminating conditions**

When the condition c) or d) is satisfy, the defrosting operation will terminate.

- The outdoor defrost sensor reads $68^{\circ}F$ or more.
- The defrosting time exceeds 10 minutes.

● **Defrosting time chart**



6. “FAN” mode operation

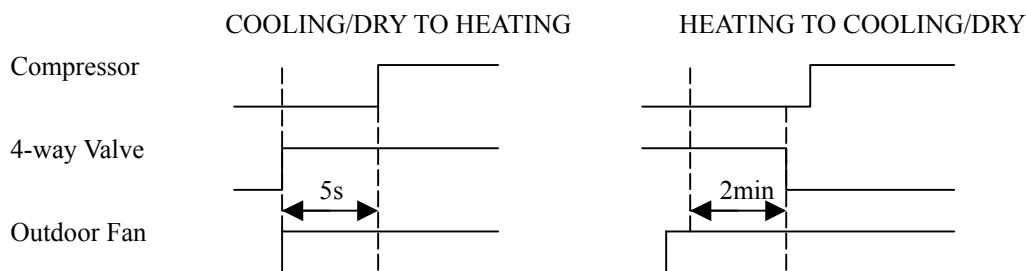
The indoor fan motor always turns on at the set speed and the vane motor turns on at the set fettle.

7. 4-way Valve control

HEATING ON

COOLING/DRY OFF

The 4-way valve reverses for 5 seconds right before start-up of the compressor as following chart:



8. “SLEEP” mode

When the SLEEP button is pressed, the SLEEP mode is selected as following:

- The indoor fan speed is set at the low speed, the power lamp and the sleep lamp is on, the temperature off after 5 minutes.
- When selecting COOLING/DRY operation with SLEEP mode, the set temperature will be raised by 1. 8°F 1 hour later and by 3. 6°F 2 hour later.
- When selecting HEATING operation with SLEEP mode, the set temperature will be dropped by 1. 8°F 1 hour later and 3. 6°F 2 hour later.
- After the System operates in SLEEP mode for 8 hours, it will stop automatically.

9. Fan motor control

(1) Rotational frequency feedback control

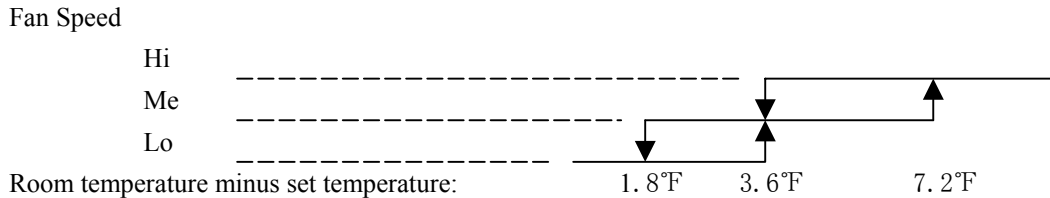
The indoor fan motor is equipped with a rotational frequency sensor, and outputs signal to the microprocessor to feedback the rotational frequency. Comparing the current rotational frequency with the target rotational frequency, the microprocessor adjusts fan motor electric to make the current rotational frequency close to the target rotational frequency. With this control, when the fan speed is switched, the rotational frequency changes smoothly.

- (2) When the rotational frequency feedback signal has not output for 5 seconds (or when the microprocessor can't detect the signal for 5 seconds), the fan motor is regarded locked-up. Then the electric current to the fan

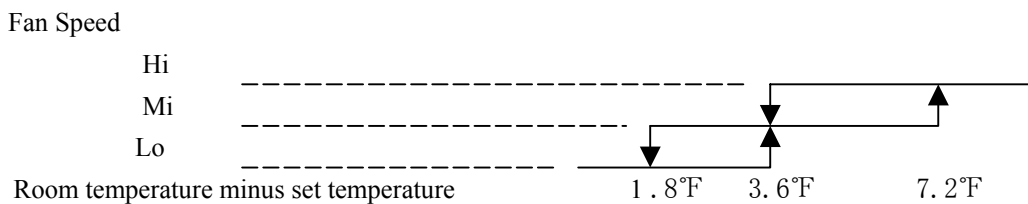
motor is shut off. 10 seconds later, the electric current is applied to the fan motor again. During the fan motor lock-up, the POWER indicator lamp flashes on and off 6times/cycle or E6 to show the fan motor abnormality.

10. Auto Fan Speed Control

- (1) When the auto fan speed is selected, the indoor fan motor speed is automatically controlled by the room temperature and the set temperature.
- (2) In COOLING mode, the indoor fan motor operates as following:



- (3) In HEATING mode, the indoor fan motor operates as following;



11. Auto Vane Operation control

- (1) Vane motor drive

The unit is equipped with a stepping motor for the vane. The rotating direction, speed, and angle of the motor are controlled by pulse signal transmitted from indoor microprocessor.
- (2) Positioning

The vane is once pressed to the vane stopper below to confirm the standard position and then set to the desired angle. The positioning is decided as follows:

 - When the ON/OFF button is pressed.
 - When the vane control is change from AUTO to MANUAL.
 - When the SWING is finished.
 - When the test run starts.
 - When the power supply turns ON.
- (3) The auto vane changes as follows by pressing the VANE CONTROL button.
- (4) VANE AUTO mode

In vane auto mode, the microprocessor automatically determines the vane angle and operation to make the optimum room-temperature distribution.
- (5) SWING mode

When presses the SWING button, the vane swings.

12. TIMER Operation

- (1) To activate the air conditioner at the desire time, follow the procedure specified below(the remote control and air conditioner are switched off):
 - Press the Timer button.
 - Select the desired mode by pressing the Mode button.
 - Select the desired temperature by pressing the ▲ ▼ button(only possible when the ‘cool’ or ‘heat’ mode is selected).
 - Select the ventilator speed (low, medium or high) or automatic mode(only possible when the feel, Cool or Heat mode is selected) by pressing the Fan button.

The ventilator always operates in the Auto mode when the Dry mode is selected.

 - Select Swing or no Swing by pressing the Swing button.

- Press the Timer button('h' flashes).
- Use the ▲▼ button to select the time at which the air conditioner must activate (between 0 and 10 hours can be set at every half hour-between 10 and 24 hours can be set at every hour).
- Press the Timer button ('h' stops flashing) and the preset time appears in the display.
- Press the Timer button again to delete the selected data from the memory.

Note : If no buttons are pressed during the programming of the timer function, the remote control will switch off automatically after 10 seconds.

- (2) To switch the air conditioner off at the desired time, follow the procedure specified below (the remote control and air conditioner are switched off):
- Press the timer button.
 - Use the ▲▼ button to select the time at which.

13. EMERGENCY Operation

When the EMERGENCY Operation switch is pressed once, COOLING mode is selected and if in 3 seconds the EMERGENCY Operation switch is pressed again, mode is selected. Then pressed once again, the unit is switched off.

When the remote controller is missing, has failed or the batteries run down, press the EMERGENCY Operation switch on the front of the indoor unit. The unit will start.

The first 30 minutes of operation will be the test run operation. The operation is for servicing. The indoor fan runs at high speed and the system is in continuous operation. The thermostat is ON and the timer is reset to normal.

After 30 minutes of test run operation the system shifts to AUTO COOLING/HEATING mode, and the indoor fan runs in automatic speed. The operation continues until the EMERGENCY operation switch is pressed or a button on the remote controller is pressed and normal operation will start.

NOTE: Do not press the EMERGENCY Operation switch during normal operation.

14. AUTO RESTART Function(Optional)

1. When the indoor unit is controlled with the remote controller, the operation mode, set temperature, and the fan speed are memorized by the indoor electric control PCB. The AUTO RESTART function sets to work the moment power has restored after power failure. Then, the unit will restart automatically.

2. How to set the AUTO RESTART function.

- Press the emergency switch and power supply to the PCB following, hold 10 seconds and the buzzer will beep three times. The AUTO-RESTART is set.
- Do the operation again, the buzzer will beep four times and the AUTO-RESTART function is cancelled.

15. Failure Display and Handling

a) Failure Display

When the controller has failure, the buzzer will sound long for three times, and displays the failure from the failure lamp.

b) Failure Code

If have the digital pipe that displays the failure code for digital pipe, or display for the run lamp.

Type of failure	The lamp flash	Display of digital pipe
The failure of room temperature sensor	Once/cycle	E1
The failure of indoor pipe temperature sensor	Twice/cycle	E2
The failure of indoor fan motor	6 times/cycle	E6

c) Failure Handling

- When the room temperature sensor or the indoor pipe temperature sensor has a failure, the system will be shut off, the compressor will be OFF, and the outdoor fan and the indoor fan will be OFF. The system doesn't receive the signal of remote controller except the signal of shut off it. When the failure disappears, the controller can operate in normal mode. Before this, presses the "ON/OFF" to start the system, and it will operate in COOLING or HEATING for 30 minutes, and follows shut off. During

this, it displays the failure and the protection is failing. You must power off/on to operate it. In the failure, you can operate the FAN mode.

- When the outdoor protects in the COOLING or DRY, the outdoor unit stops, the indoor fan operates in set speed ; and in the HEATING, the outdoor unit stops, the indoor fan operates in cold air prevention control. The system doesn't receive the signal of remoter controller except the signal of shut off. When the system checks the voltage is 220V and the delay control is finished, it operates at normal again.
- When the indoor fan motor is failure, the compressor is stopped, the outdoor fan and indoor fan is stopped and display the failure. The system doesn't receive the signal of remoter controller except the signal of shut it off.

d) Display Of The Control

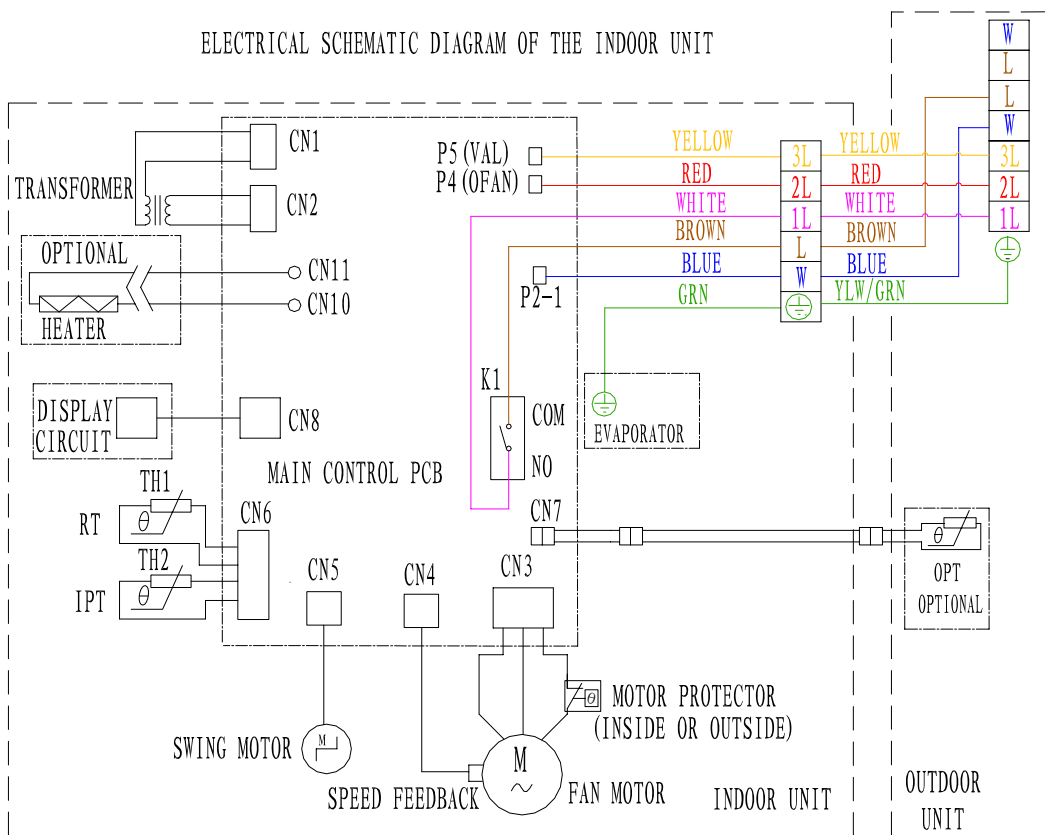
In the display board the lamp from left is the POWER lamp(Red), the SLEEP lamp(Yellow), the TIMER lamp(Yellow), the RUN lamp(Green).

g) When it gives the control power, the buzzer sounds long for 0.3 second per cycle.

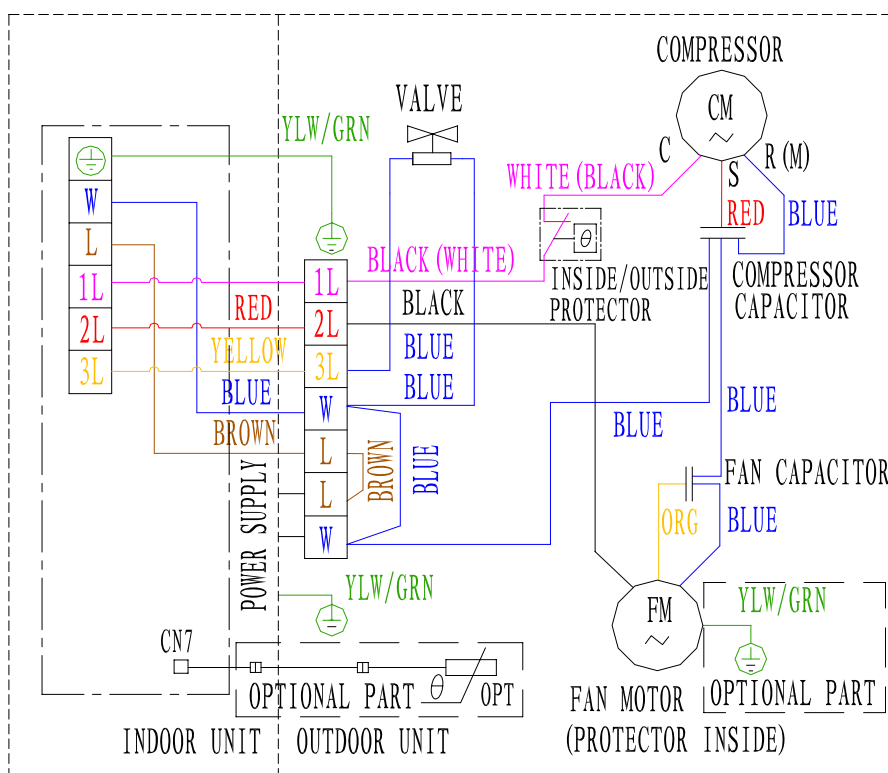
ELECTRICAL SCHEMATIC DIAGRAM

MODEL: KFTHP-12

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT

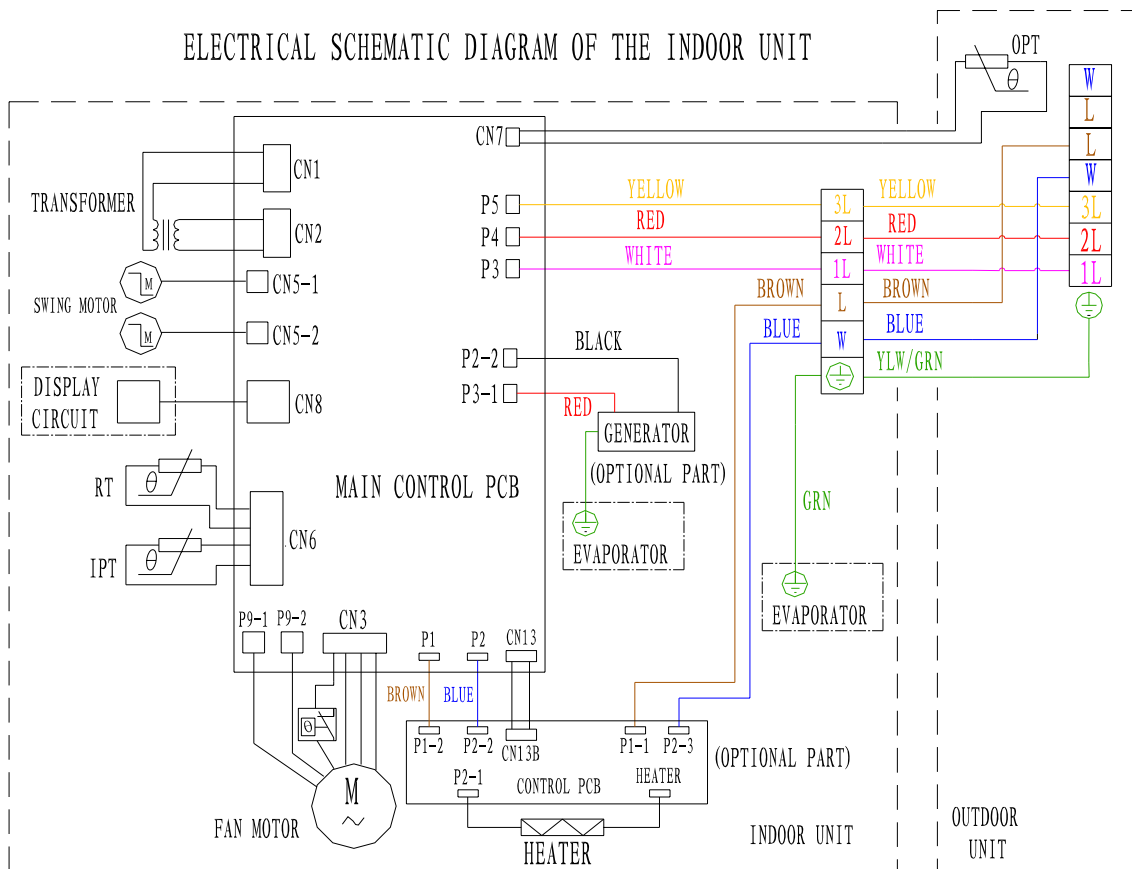


ELECTRICAL SCHEMATIC DIAGRAM OF THE OUTDOOR UNIT

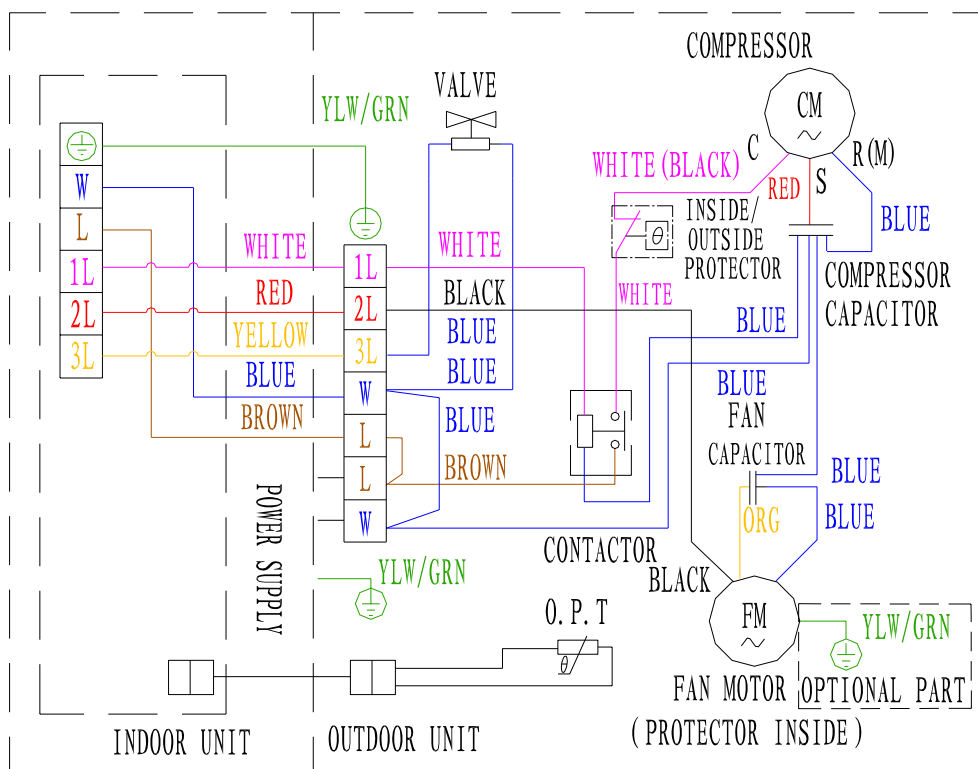


ELECTRICAL SCHEMATIC DIAGRAM

MODEL: KFTHP-18



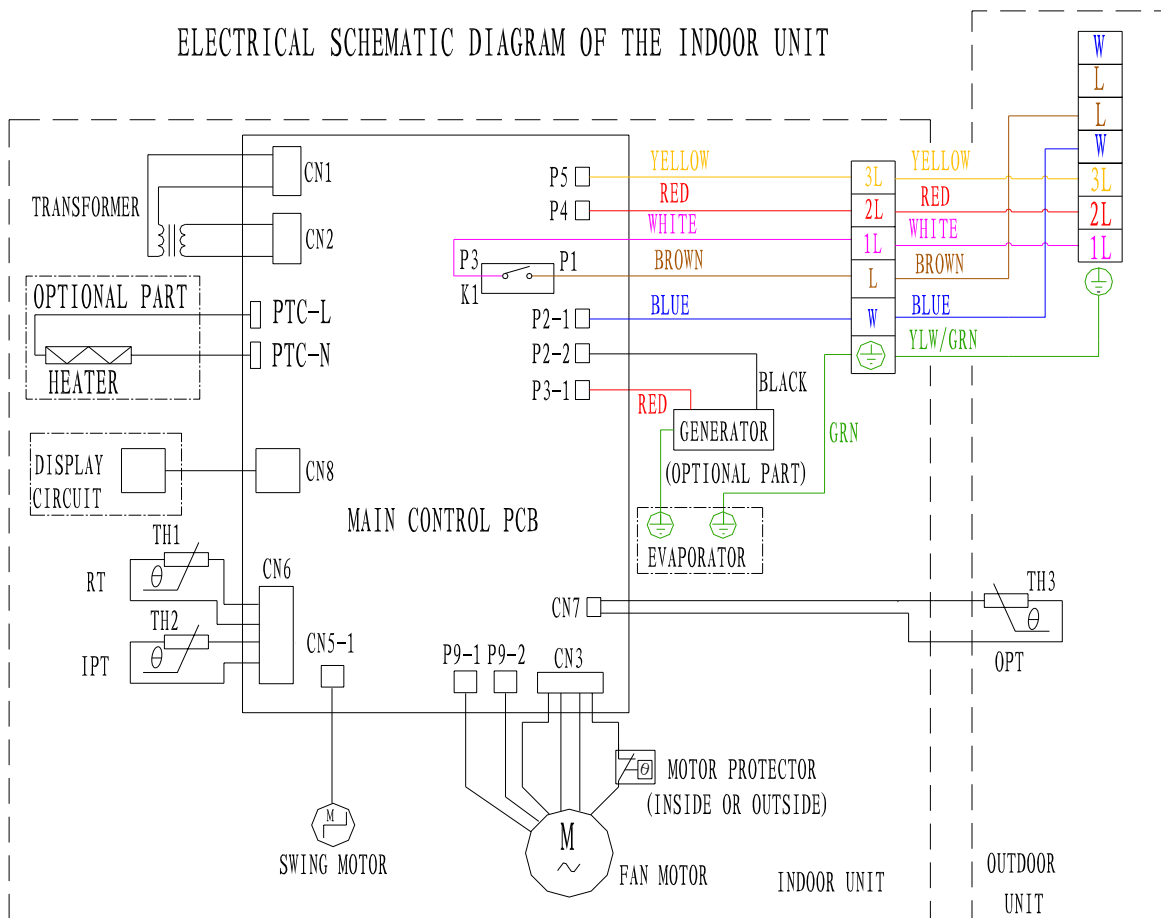
ELECTRICAL SCHEMATIC DIAGRAM OF THE OUTDOOR UNIT



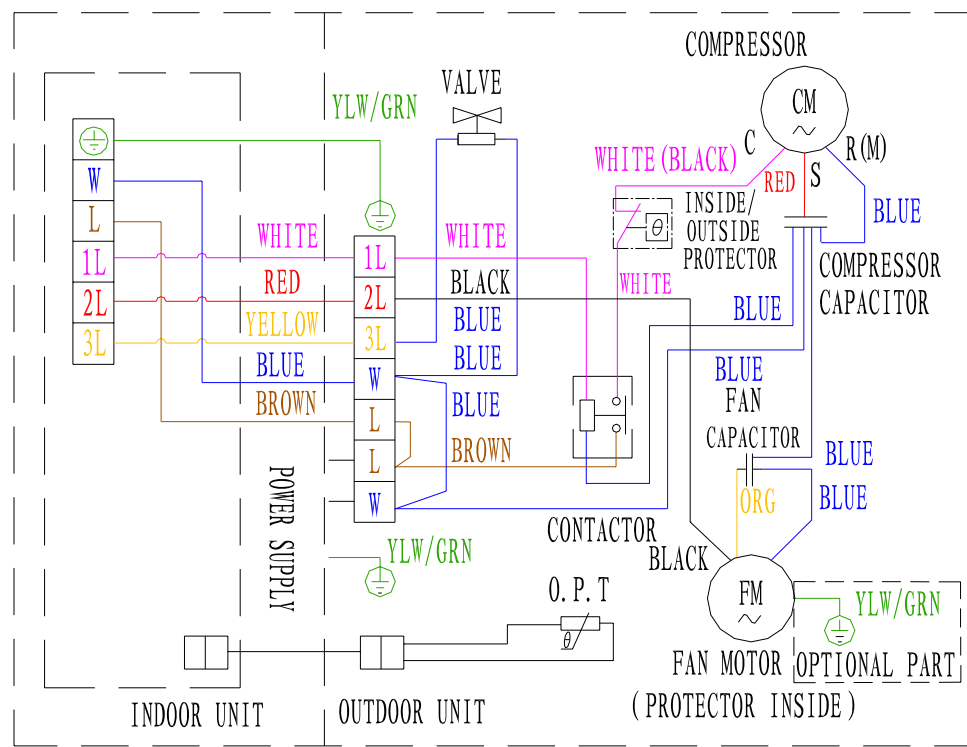
ELECTRICAL SCHEMATIC DIAGRAM

MODEL: KFTHP-24

ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT

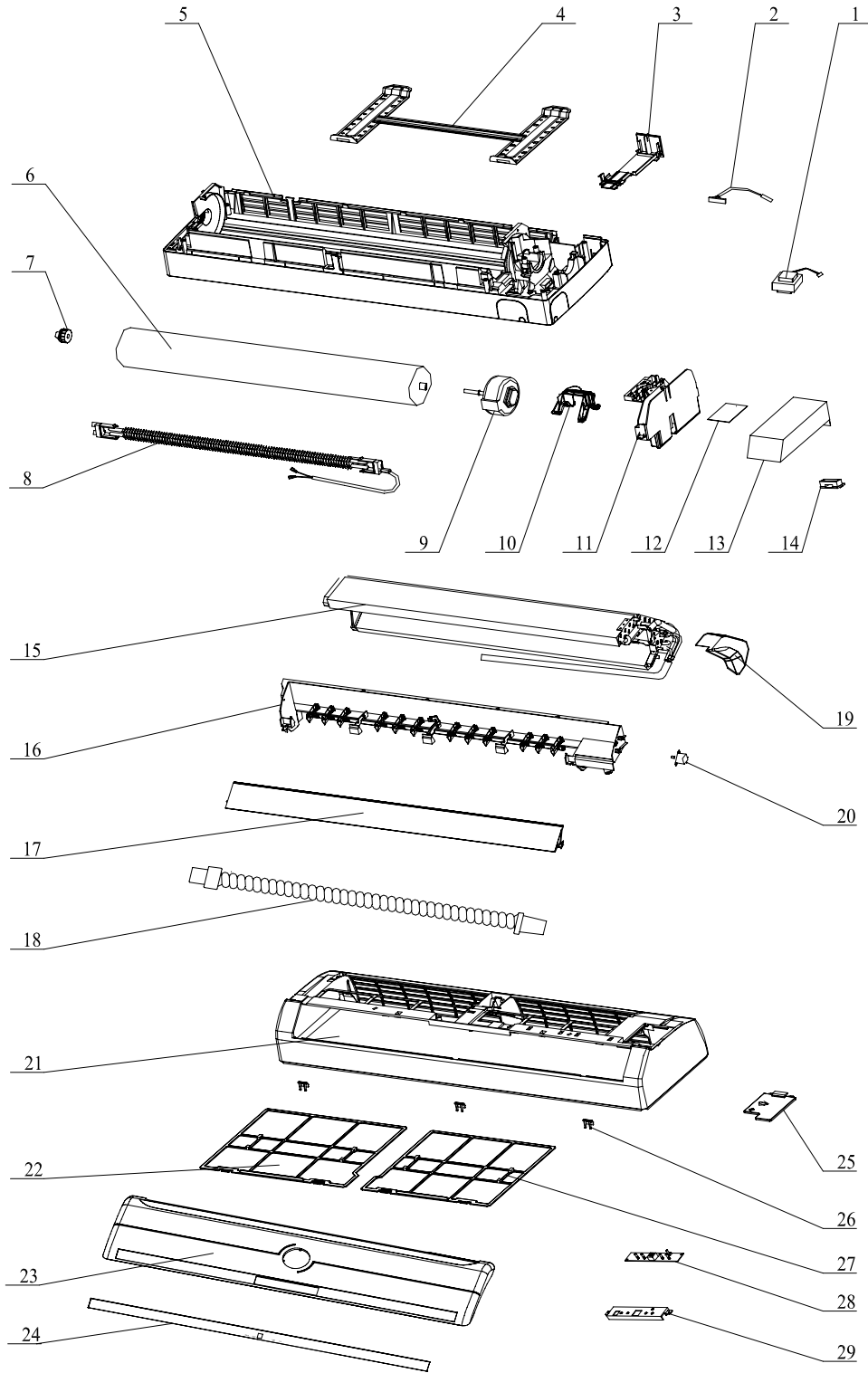


ELECTRICAL SCHEMATIC DIAGRAM OF THE INDOOR UNIT



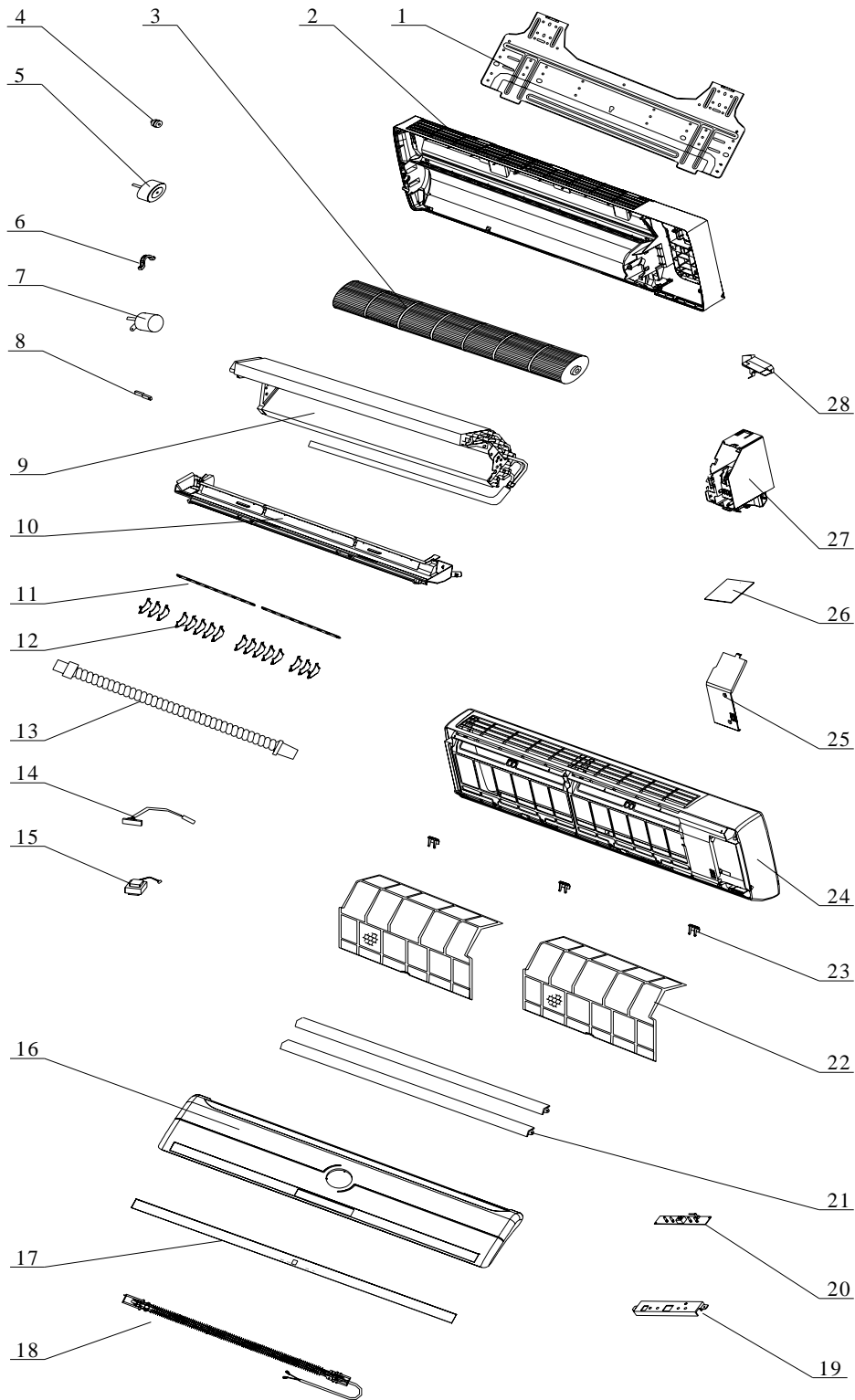
EXPLOSION VIEW

MODEL: KFTHP-12
INDOOR UNIT



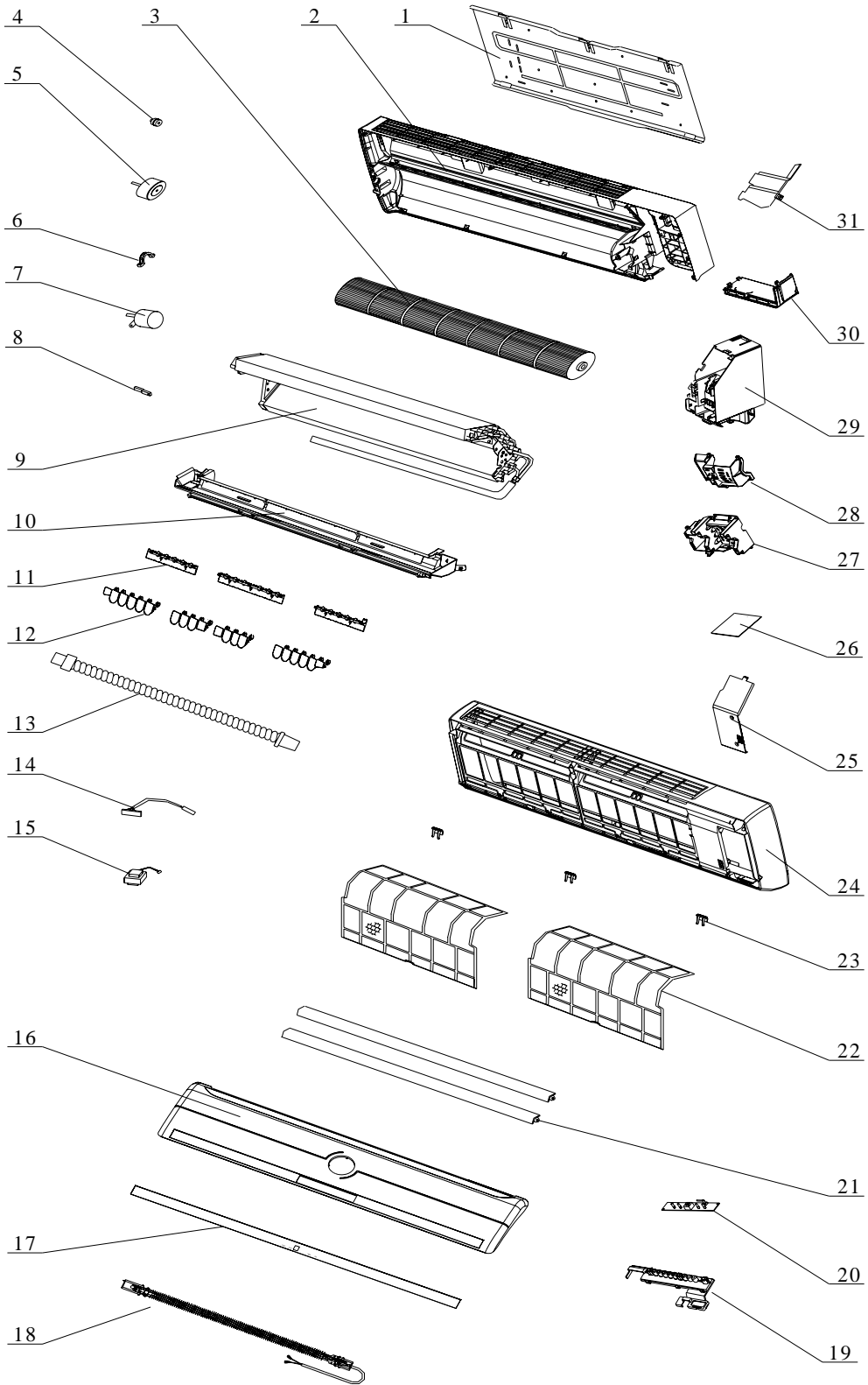
EXPLOSION VIEW

MODEL: KFTHP-18
INDOOR UNIT



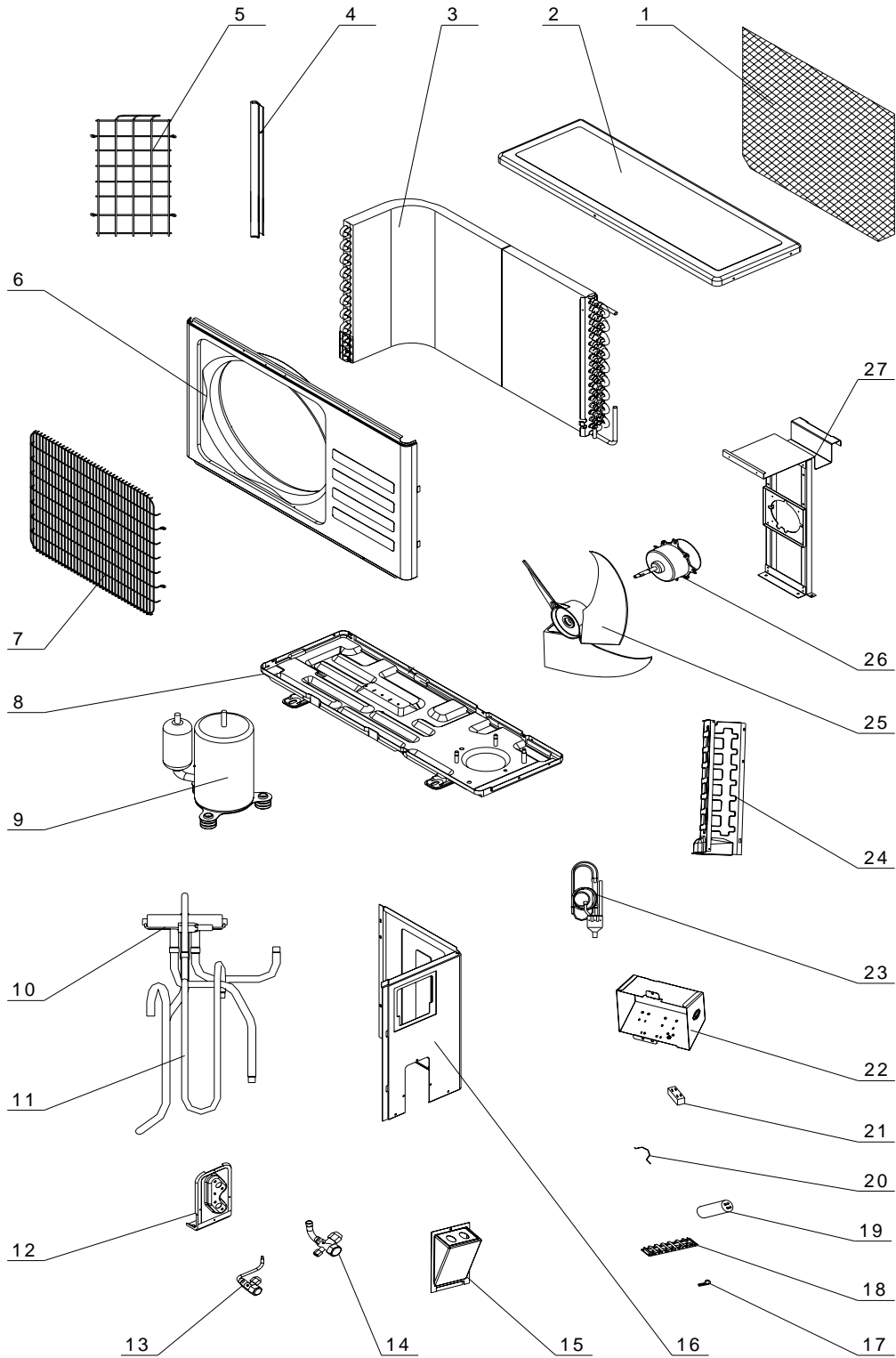
EXPLOSION VIEW

MODEL: KFTHP-24
INDOOR UNIT



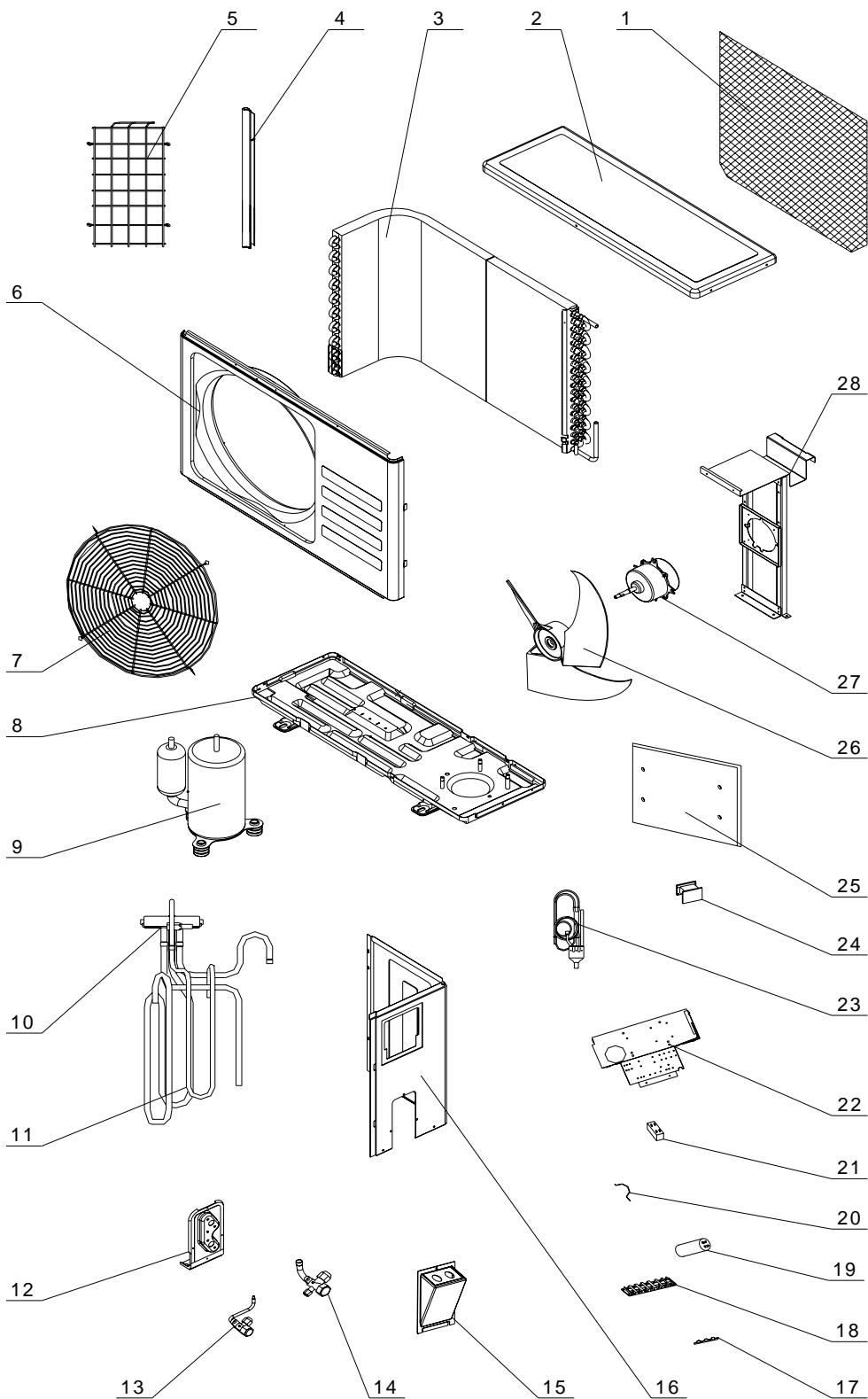
EXPLOSION VIEW

MODEL: KFTHP-12
OUTDOOR UNIT



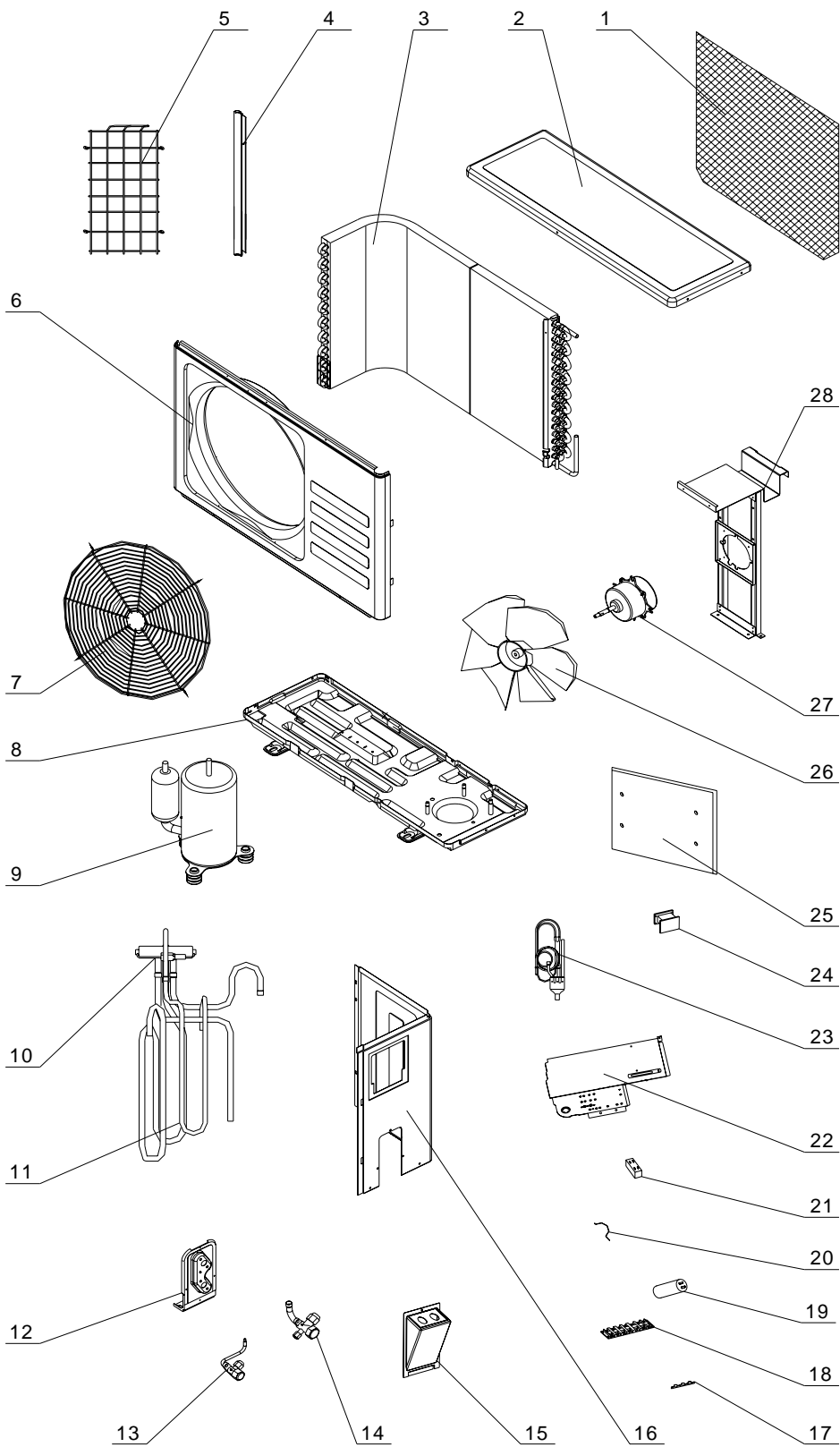
EXPLOSION VIEW

MODEL: KFTHP-18
OUTDOOR UNIT



EXPLOSION VIEW

MODEL: KFTHP-24
OUTDOOR UNIT



Part List

Indoor Unit- KFTHP-12

No.	Part No.	Part Name	Q'ty	Remark
1	1170240001	Transformer	1	
2	1170230001	Indoor Sensor Assembly	1	
3	1070350245	In And Out Pipe Fixer	1	
4	1080030021	Installation Plate	1	
5	1070350243	Base	1	
6	1070020024	Cross Fan	1	
7	1070100010	Bearing Mount	1	
8	1090020030	Heater	1	
9	1170030065	Indoor Motor	1	
10	1070350152	Indoor Motor Cover	1	
11	1070350119	Electrical Box	1	
12	1090500224	Main PCB	1	
13	1070350235	Electrical Box Cover	1	
14	1070040005	Cable Clamp Base	1	
	1070040006	Cable Clamp Cover	1	
15	1110050903	Evaporator	1	
16	1070350137	Water Drainage Assembly	12	
17	1070350140	Vane	1	
18	1070110011	Drainage Hose	1	
19	1070350155	Evaporator Fastness Clamp	1	
20	1170020011	Vane Motor	1	
21	1070500250	Face Frame	1	
22	1070190012	Left Air Filter	1	
23	1070450115	Front Panel	1	
24	1071990048	Display PCB Cover	1	
25	1070500246	Servicing Cover	1	
26	1070350135	Screw Cover	3	
27	1070190013	Right Air Filter	1	
28	1090500118	Display PCB	1	
29	1070250425	Display PCB Box	1	
30	1090050318	Remote Controller	1	Not shown in Explosion view
31	1070060003	Remote Controller Supporter	1	
32	1190470001	Indoor Carton	1	
33	1190060054	Left Foaming	1	
34	1190060055	Right Foaming	1	

Part List

Indoor Unit- KFTHP-18

No.	Part No.	Part Name	Q'ty	Remark
1	1080030001	Installation Plate	1	
2	1213090101	Base	1	
3	1070020014	Cross Fan	1	
4	1070100010	Bearing Mount	1	
5	1170030075	Indoor Motor	1	
6	1073090120	Indoor Motor Clamp	1	
7	1170020011	Vane Motor	2	
8	1083090108	Clip Base	1	
9	1110050896	Evaporator	1	
10	1213090102	Water Drainage Assembly	1	
11	1073090105	Vertical Vane Supporter	1	
12	1073090106	Vertical Vane A	14	
	1073090107	Vertical Vane B	2	
13	1070110011	Drainage Hose	1	
14	1170230001	Indoor Sensor Assembly	1	
15	1173090107	Transformer	1	
16	1070500692	Front Panel	1	
17	1070500502	Display PCB Cover	1	
18	1091990054	Heater	1	
19	1073090126	Display PCB Box	1	
20	1090500501	Display PCB	1	
21	1073090108	Vane A	1	
	1073090125	Vane B	1	
22	1073090112	Left Air Filter	1	
	1073090113	Right Air Filter	1	
23	1073090111	Screw Cover	3	
24	1070500312	Face Frame	1	
25	1073090114	Electrical Box Cover	1	
26	1090700209	Main PCB	1	
27	1073090121	Electrical Box	1	
28	1070500008	Breakwater	1	
29	1090050318	Remote Controller	1	Not shown in Explosion view
30	1070060003	Remote Controller Supporter	1	
31	1190060003	Indoor Carton	1	
32	1190060019	Left Foaming	1	
33	1190060020	Right Foaming	1	
34	1190060002	Middle Pasteboard Supporter	1	
35	1190060021	Middle Foaming Supporter	1	

Part List

Indoor Unit- KFTHP-24

No.	Part No.	Part Name	Q'ty	Remark
1	1080030017	Installation Plate	1	
2	1070850102	Base	1	
3	1070020021	Cross Fan	1	
4	1070100014	Bearing Mount	1	
5	1170030076	Indoor Motor	1	
6	1070850133	Indoor Motor Clamp	1	
7	1170020023	Vane Motor	2	
8	1070850140	Clip Base	1	
9	1110050894	Evaporator	1	
10	1210850106	Water Drainage Assembly	1	
11	1070850114	Left Vertical Vane Supporter	1	
	1070850116	Middle Vertical Vane Supporter	1	
	1070850119	Right Vertical Vane Supporter	1	
12	1070850121	Large Vertical Vane	16	
	1070850122	Middle Vertical Vane	2	
	1070850123	Small Vertical Vane	2	
13	1070110012	Drainage Hose	1	
14	1170230001	Indoor Sensor Assembly	1	
15	1173090107	Transformer	1	
16	1070850257	Front Panel	1	
17	1070850148	Display PCB Cover	1	
18	1091990055	Heater	1	
19	1070850145	Display PCB Box	1	
20	1090500501	Display PCB	1	
21	1070850107	Up Vane	1	
	1070850108	Down Vane	1	
22	1070850131	Air Filter	2	
23	1070850130	Screw Cover	3	
24	1070850126	Face Frame	1	
25	1070850219	Electrical Box Cover	1	
26	1090850117	Main PCB	1	
27	1070850132	Indoor Motor Base	1	
28	1070850133	Indoor Motor Cover	1	
29	1070850218	Electrical Box	1	
30	1070850103	In And Out Pipe Fixer	1	
31	1070850135	Breakwater	1	
32	1090050318	Remote Controller	1	Not shown in Explosion view
33	1070060003	Remote Controller Supporter	1	
34	1190040008	Indoor Carton	1	
35	1190070037	Base Foaming	1	
36	1190070038	Upper Foaming	1	

Part List

Outdoor Unit- KFTHP-12

No.	Part No.	Part Name	Q'ty	Remark
1	1400250857	Grille	1	
2	1080050011	Top Cover	1	
3	1110060867	Condenser	1	
4	1080050001	Left Grille Supporter	1	
5	1080050007	Left Grille	1	
6	1080050009	Front Plate	1	
7	1080320112	Fan Guard	1	
8	1210250121	Base	1	
9	1100060092	Compressor And It Accessories	1	
10	1120500226	4-way Valve	1	
11	1120250561	4-way Valve Assembly	1	
12	1080050003	Valve Supporter	1	
13	1120120021	Two-way Valve	1	
14	1120130036	Three-way Valve	1	
15	1081990107	Electrical Box Cover	1	
16	1080050002	Right Plate	1	
17	1070040001	Cable Clamp $\Phi 6$	1	
	1070040003	Cable Clamp $\Phi 8$	1	
	1070040008	Cable Clamp $\Phi 10$	1	
18	1171990049	Terminal	1	
19	1170100004	Compressor Capacitor	1	
20	1080010006	Capacitor Strip	1	
21	1170100032	Fan Motor Capacitor	1	
22	1080020001	Electrical Parts Box	1	
23	1120350781	Capillary Assembly	1	
24	1080170001	Partition plate	1	
25	1070030016	Propeller Fan	1	
26	1170040064	Outdoor Motor	1	
27	1080050004	Outdoor Motor Supporter	1	
28	1190070020	Base Carton	1	Not shown in the Explosion view.
29	1190070002	Cabinet Carton	1	
30	1190070022	Base Foaming	1	
31	1190070021	Cover Forming	1	

Part List

Outdoor Unit- KFTHP-18

No.	Part No.	Part Name	Q'ty	Remark
1	1071990041	Grille	1	
2	1081990038	Top Cover	1	
3	1110061027	Condenser	1	
4	1081990040	Left Grille Supporter	1	
5	1081990045	Left Grille	1	
6	1081990047	Front Plate	1	
7	1081990048	Fan Guard	1	
8	1081990052	Base	1	
9	1100060093	Compressor And It Accessories	1	
10	1120500226	4-way Valve	1	
11	1120500853	4-way Valve Assembly	1	
12	1081990041	Valve Supporter	1	
13	1120120021	Two-way Valve	1	
14	1120130032	Three-way Valve	1	
15	1081990107	Electrical Box Cover	1	
16	1081990039	Right Plate	1	
17	1074060118	Cable Clamp	1	
18	1171990049	Terminal	1	
19	1170100026	Compressor Capacitor	1	
20	1080010006	Capacitor Strip	1	
21	1170100030	Fan Motor Capacitor	1	
22	1081990049	Electrical Parts Box	1	
23	1120500852	Capillary Assembly	1	
24	1174561801	AC Contactor	1	
25	1141990004	Sound Insulation	1	
26	1070030025	Propeller Fan	1	
27	1170040112	Outdoor Motor	1	
28	1081990042	Outdoor Motor Supporter	1	
29	1190060191	Base Carton	1	Not shown in the Explosion view.
30	1190500707	Cabinet Carton	1	
31	1190060190	Base Foaming	1	
32	1190070052	Cover Forming	1	

Part List

Outdoor Unit- KFTHP-24

No.	Part No.	Part Name	Q'ty	Remark
1	1071990055	Grille	1	
2	1080050045	Top Cover	1	
3	1110061030	Condenser	1	
4	1080050042	Left Grille Supporter	1	
5	1080050046	Left Grille	1	
6	1080050047	Front Plate	1	
7	1080050048	Fan Guard	1	
8	1080110001	Base	1	
9	1100200008	Compressor And It Accessories	1	
10	1120110017	4-way Valve	1	
11	1120700527	4-way Valve Assembly	1	
12	1080050044	Valve Supporter	1	
13	1120120037	Two-way Valve	1	
14	1120130047	Three-way Valve	1	
15	1081990107	Electrical Box Cover	1	
16	1080050043	Right Plate	1	
17	1074060118	Cable Clamp	1	
18	1171990049	Terminal	1	
19	1170100007	Compressor Capacitor	1	
20	1080010004	Capacitor Strip	1	
21	1170100029	Fan Motor Capacitor	1	
22	1080050056	Electrical Parts Box	1	
23	1120700526	Capillary Assembly	1	
24	1174561801	AC Contactor	1	
25	1140020003	Sound Insulation	1	
26	1070030023	Propeller Fan	1	
27	1170040115	Outdoor Motor	1	
28	1080050050	Outdoor Motor Supporter	1	
29	1190430001	Cabinet Carton	1	Not shown in the Explosion view.
30	1170230005	Outdoor Sensor	1	
31	1190070041	Cover Forming	1	